



Human dimensions of climate change: The vulnerability of small farmers in the Amazon

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Abstract:

This paper argues for a twofold perspective on human adaptation to climate change in the Amazon. First, we need to understand the processes that mediate perceptions of environmental change and the behavioural responses at the levels of the individual and the local population. Second, we should take into account the process of production and dissemination of global and national climate information and models to regional and local populations, especially small farmers. We discuss the sociocultural and environmental diversity of small farmers in the Amazon and their susceptibility to climate change associated with drought, flooding and accidental fire. Using survey, ethnographic and archival data from study areas in the state of Para, we discuss farmers' sources of knowledge and long-term memory of climatic events, drought and accidental fire; their sources of climate information; their responses to drought and fire events and the impact of changing rainfall patterns on land use. We highlight the challenges of adaptation to climate change created by the influence of migration and family turnover on collective action and memory, the mismatch of scales used to monitor and disseminate climate data and the lack of extension services to translate large-scale forecasts to local needs. We found that for most farmers, memories of extended drought tend to decrease significantly after 3 years. Over 50% of the farmers interviewed in 2002 did not remember as significant the El Nino Southern Oscillation (ENSO) drought of 1997/1998. This helps explain why approximately 40% of the farmers have not changed their land-use behaviours in the face of the strongest ENSO event of the twentieth century.

Source: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2374891>

Resource Description

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Other Communication Audience: Farmers

Exposure :

weather or climate related pathway by which climate change affects health

Climate Change and Human Health Literature Portal

Extreme Weather Event

Extreme Weather Event: Drought, Flooding, Wildfires

Geographic Feature: 

resource focuses on specific type of geography

Rural

Geographic Location: 

resource focuses on specific location

Non-United States

Non-United States: Central/South America

Health Impact: 

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Mitigation/Adaptation: 

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status, Workers

Resource Type: 

format or standard characteristic of resource

Research Article, Research Article

Resilience: 

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale: 

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: 

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content

